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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/544,220

08/02/2005

Tetsuya Murakami

AI 385NP

9471

23995

7590

12/01/2008

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EXAMINER

WINNER, TONY H

ART UNIT

PAPER NUMBER

3611

MAIL DATE

DELIVERY MODE

12/01/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/544,220	Applicant(s) MURAKAMI ET AL.	
	Examiner Tony H. Winner	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/13/08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11, 16 and 17 is/are allowed.
- 6) ☒ Claim(s) 3, 4, 7, 8, and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Acknowledgment

1. Receipt of an amendment filed 8/13/08 has been acknowledged and entered. In view of the amendment, the office is withdrawing rejection to claims 9-11 and 16-17. Accordingly, these claims are in condition for allowance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-4, 6-8, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki (USPN. 6,938,722) in view of Hirose et al. (USPN. 4,768,998).

Sasaki discloses an electric power steering apparatus (figure 5) comprising:

- a. a reduction gear mechanism for reducing a rotation speed of an output shaft of the electric motor;
- b. a conversion mechanism for converting an output rotation of the reduction gear mechanism into an axial movement of a steerable shaft extending in a transverse direction of a vehicle;

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- c. a driven pulley (29) disposed so as to surround the steerable shaft;
- d. an endless belt (30) for connecting a driving pulley (28) and the driven pulley (29);
- e. a housing (39a) for containing the driving pulley (28), the driving pulley having a through hole opened at the first end portion and the second end portion thereof, the input shaft (31) penetrating through the through hole of the driving pulley, and the input shaft comprising a pair of parts extending to both sides respectively with the driving pulley interposed therebetween, and the pair of parts of the input shaft being rotatably supported respectively by corresponding bearings (33 and 34) held by the housing; and
- f. the driving pulley being in the shape of a cylinder and having a first end portion and a second end portion, the first end portion of the driving pulley being closer to the output shaft of the electric motor than the second end portion, and at least the first end portion of the driving pulley being opened.

Sasaki lacks the reduction mechanism comprising: an inscribed gear having external teeth and a circumscribed gear having internal teeth in which the inscribed gear is inscribed.

Hirose teaches an apparatus for bicycle, wherein the belt driving system, includes all of the structure of the claimed invention, which allows the system to obtain higher rotational speed.

Therefore, it would have been obvious to one skilled in the art to modify the reduction mechanism of Sasaki to include the inscribed/circumscribed gearing system as taught by Hirose, for the reasons set forth above.

Sasaki as modified by Hirose is disclosed above but does not teach the driven pulley having a diameter that is greater than a diameter of the driving pulley. However, **the examiner takes an Official Notice** that the use of such device is old and well known in the mechanical art, particularly in the motorcycle where the input pulley is significantly smaller than the output pulley. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the driven pulley having smaller diameter than the diameter of the driving pulley such that it would allow the device to fit the requirements of a wider range of applications.

Regarding claims 3-4 and 6-8 Sasaki as modified by Hirose meets all of the claimed limitations.

Regarding claims 14-15 Sasaki as modified by Hirose is disclosed above but lacks a pair of guide parts opposed the first and second end portions of the driving pulley. However, Sasaki (figure 19) teaches a pair of guide parts opposed the first and second end portions of the pulleys for the purpose of restricting axial movement. Therefore, it would have been obvious to one skilled in the art to include the teaching of figure 19 of Sasaki, for the reasons set forth above.

Response to Arguments

4. Applicant's arguments filed 8/13/08 have been fully considered but they are moot in view of new ground of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP, 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Anthony H. Winner whose telephone number is (571) 272-6654. The examiner can normally be reached on Monday-Friday from 9:30 am to 6:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris, can be reached on (571) 272-6651. Currently, the

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fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information-Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-6584.

/Tony H. Winner/
Primary Examiner, Art Unit 3611
November 22, 2008